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iTunes

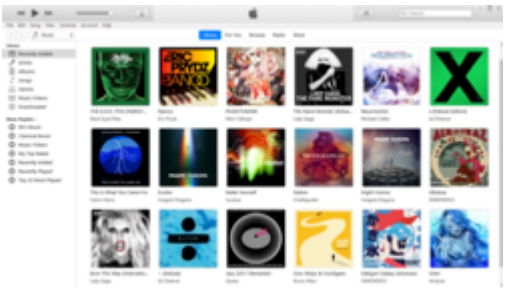
iTunes is a media player, media library, and mobile device management (**MDM**) utility developed by Apple. It is used to purchase, play, download and organize digital multimedia on personal computers running the macOS and Windows operating systems, and can be used to rip songs from CDs as well as playing content from dynamic, smart playlists. It includes options for sound optimization and wirelessly sharing iTunes libraries.

iTunes was announced by Apple CEO Steve Jobs on January 9, 2001. Its original and main focus was music, with a library offering organization and storage of Mac users' music collections. With the 2003 addition of the iTunes Store for purchasing and downloading digital music, and a Windows version of the program, it became an ubiquitous tool for managing music and configuring other features on Apple's line of iPod media players, which extended to the iPhone and iPad upon their introduction. From 2005 on, Apple expanded its core music features with support for digital video, podcasts, e-books, and mobile apps purchased from the iOS App Store. Since the release of iOS 5 in 2011, these devices have become less dependent on iTunes, though it can still be used to back up their contents.

Though well received in its early years, iTunes received increasing criticism for a bloated user experience, which incorporated features beyond its original focus on music. Beginning with Macs running macOS Catalina, iTunes was replaced by separate apps, namely Music, Podcasts, and TV, with Finder and Apple Devices taking over the device management capabilities.[1][2][3] This change did not affect iTunes running on Windows or older macOS versions.[4]

In February 2024, most features of iTunes for Windows were split into the Apple TV, Music, and Apple Devices apps. When the apps are installed, iTunes is still used for podcasts and audiobooks as

iTunes



Screenshot of iTunes 12.13.4.4 on Windows 10

Developer(s)	Apple Inc.
Initial release	January 9, 2001
Stable release	12.13.6.1 / March 8, 2025
Operating system	– macOS Mojave and earlier (until version 12.9.5); can be installed on macOS Catalina to macOS Sequoia using third party software. – Windows 10 and Windows 11 (latest version)
Platform	▪ macOS ▪ Windows
Successor	For media: TV (macOS and Windows) Music (macOS and Windows) Podcasts (macOS only)

there is currently no Windows version of Apple Podcasts.[5] iTunes for Windows is still supported, and still receives security & iOS device driver updates.

	For device management: Finder (macOS) Apple Devices (Windows)
Type	CD ripper Digital asset management Media player Optical disc authoring Tag editor
License	Freeware
Website	itunes.com (https://itunes.com)

History

SoundJam MP, released by Casady & Greene in 1999, was renamed "iTunes" when Apple purchased it the next year. The primary developers of the software moved to Apple as part of the acquisition, and simplified SoundJam's user interface, added the ability to burn CDs, and removed its recording feature and skin support.[6][7] The first version of iTunes, promotionally dubbed "World's Best and Easiest To Use Jukebox Software",[8] was announced on January 9, 2001.[9] Subsequent releases of iTunes often coincided with new hardware devices, and gradually included support for new features, including "smart playlists", the iTunes Store, and new audio formats.[9]

Platform availability

Apple released iTunes for Windows on October 16, 2003.[10]

On April 26, 2018, iTunes was released on Microsoft Store for Windows 10,[11] primarily to allow it to be installed on Windows 10 devices configured to only allow installation of software from Microsoft Store.[12] Unlike Windows versions for other platforms, it is more self-contained due to technical requirements for distribution on the store (not installing background helper services such as Bonjour), and is updated automatically through the store rather than using Apple Software Update.[13]

The role of iTunes has been replaced with independent apps, Apple Music, Apple Podcasts, Apple Books, and Apple TV; with iPhone, iPod, and iPad management integrated into the Finder starting with macOS 10.15 Catalina, and appearing as Apple Devices starting with Windows 10.[14][15]

Music library

iTunes features a music library. Each track has attributes, called metadata, that can be edited by the user, including changing the name of the artist, album, and genre, year of release, artwork, among other additional settings.[16][17] The software supports importing digital audio tracks that can then be transferred to iOS devices,[18] as well as supporting ripping content from CDs.[19][20] iTunes supports WAV, AIFF, Apple Lossless, AAC, and MP3 audio formats.[21] It uses the Gracenote music database to provide track name listings for audio CDs. When users rip content from a CD, iTunes attempts to match songs to the Gracenote service. For self-published CDs, or those from obscure record labels, iTunes would normally only list tracks as numbered entries ("Track 1" and "Track 2") on an unnamed album by an unknown artist, requiring manual input of data.[22]

File metadata is displayed in users' libraries in columns, including album, artist, genre, composer, and more.[23] Users can enable or disable different columns, as well as change view settings.[24]

Special playlists

Introduced in 2004,[25] "Party Shuffle" selected tracks to play randomly from the library, though users could press a button to skip a song and go to the next in the list.[26] The feature was later renamed "iTunes DJ",[27] before being discontinued altogether, replaced by a simpler "Up Next" feature that notably lost some of "iTunes DJ"'s functionality.[28]

Introduced in iTunes 8 in 2008, "Genius" can automatically generate a playlist of songs from the user's library that "go great together".[29] "Genius" transmits information about the user's library to Apple anonymously, and evolves over time to enhance its recommendation system. It can also suggest purchases to fill out "holes" in the library.[30] The feature was updated with iTunes 9 in 2009 to offer "Genius Mixes", which generated playlists based on specific music genres.[31][32]

"Smart playlists" are a set of playlists that can be set to automatically filter the library based on a customized list of selection criteria, much like a database query. Multiple criteria can be entered to manage the smart playlist.[33] Selection criteria examples include a genre like Christmas music, songs that have not been played recently, or songs the user has listened to the most in a time period.[34]

Library sharing

Through a "Home Sharing" feature, users can share their iTunes library wirelessly.[35] Computer firewalls must allow network traffic, and users must specifically enable sharing in the iTunes preferences menu. iOS applications also exist that can transfer content without Internet.[36] Additionally, users can set up a network-attached storage system, and connect to that storage system through an app.[37]

Sound processing

iTunes includes sound processing features, such as equalization, "sound enhancement" and crossfade. There is also a feature called Sound Check, which normalizes the playback volume of all songs in the library to the same level.[38][39]

Online music functionality

iTunes Store

Introduced on April 28, 2003, The iTunes Music Store allows users to buy and download songs, with 200,000 tracks available at launch. In its first week, customers bought more than one million songs.[40] Music purchased was protected by FairPlay, an encryption layer referred to as digital rights management (DRM).[41] The use of DRM, which limited devices capable of playing purchased files,[42] sparked efforts to remove the protection mechanism.[43] Eventually, after an open letter to the music industry by CEO Steve Jobs in February 2007,[44] Apple introduced a selection of DRM-free music in the iTunes Store in April 2007,[45] followed by its entire music catalog without DRM in January 2009.[46]

iTunes in the Cloud and iTunes Match

In June 2011, Apple announced "iTunes in the Cloud", in which music purchases were stored on Apple's servers and made available for automatic downloading on new devices. For music the user owns, such as content ripped from CDs, the company introduced "iTunes Match", a feature that can upload content to Apple's servers, match it to its catalog, change the quality to 256 kbit/s AAC format, and make it available to other devices.[47][48]

Internet radio, iTunes Radio and Apple Music

When iTunes was first released, it came with support for the Kerbango Internet radio tuner service.[49] In June 2013, the company announced iTunes Radio, a free music streaming service.[50] In June 2015, Apple announced Apple Music, a subscription-based music streaming service, and subsequently integrated iTunes Radio functionality. Music tracks provided by Apple Music via iTunes are available at up to 256 kbit/s AAC fidelity. The Apple Music app also integrates Apple Music 1, a live music radio station.[51]

Phasing out

As of 2024, Apple is phasing out iTunes in favour of three dedicated apps, Music, Podcasts, and TV, but the iTunes Store will still remain.[52]

Other features

Video

In May 2005, video support was introduced to iTunes with the release of iTunes 4.8,[53][54] though it was limited to bonus features part of album purchases.[55] The following October, Apple introduced iTunes 6, enabling support for purchasing and viewing video content purchased from the iTunes Store.[56] At launch, the store offered popular shows from the ABC network, including *Desperate Housewives* and *Lost*, along with Disney Channel series *That's So Raven* and *The Suite Life of Zack & Cody*. CEO Steve Jobs told the press that "We're doing for video what we've done for music — we're making it easy and affordable to purchase and download, play on your computer, and take with you on your iPod."[56]

In 2008, Apple and select film studios introduced "iTunes Digital Copy", a feature on select DVDs and Blu-ray discs allowing a digital copy in iTunes and associated media players.[57][58][59]

Podcasts

In June 2005, Apple updated iTunes with support for podcasts.[60][61] Users can subscribe to podcasts, change update frequency, define how many episodes to download and how many to delete.[61]

Similar to songs, "Smart playlists" can be used to control podcasts in a playlist, setting criteria such as date and number of times listened to.[62]

Apple is credited for being the major catalyst behind the early growth of podcasting.[63]

Apps

The icon used by Apple to represent a podcast

On July 10, 2008, Apple introduced native mobile apps for its iOS operating system. On iOS, a dedicated App Store application served as the storefront for browsing, downloading, updating, and otherwise managing applications, whereas iTunes on computers had a dedicated section for apps rather than a separate app.[64] In September 2017, Apple updated iTunes to version 12.7, removing the App Store section in the process.[65][66] iTunes 12.6.3 was released the following month, retaining App Store functionality, with *9to5Mac* noting that the secondary release was positioned by Apple as "necessary for some businesses performing internal app deployments".[67][68]

iTunes U

In May 2007, Apple announced the launch of "iTunes U" via the iTunes Store, which delivers university lectures from top U.S. colleges.[69][70] With iTunes version 12.7 in August 2017, iTunes U collections became a part of the Podcasts app.[71] On June 10, 2020, Apple formally announced that iTunes U would be discontinued at the end of 2021.[72]

Apple mobile device connectivity

iTunes was required to activate early iPhone and iPad devices. Beginning with the iPhone 3G in June 2008, activation did not require iTunes, making use of activation at point of sale.[73] Later iPhone models are able to be activated and set-up on their own, without requiring the use of iTunes.

iTunes also allows users to backup and restore the content of their Apple mobile devices, such as music, photos, videos, ringtones and device settings,[74] and restore the firmware of their devices. However, as of iTunes 12.7, apps can no longer be purchased and installed using iTunes.[66]

Ping

With the release of iTunes 10 in September 2010, Apple announced iTunes Ping, which CEO Steve Jobs described as "social music discovery". It had features reminiscent of Facebook, including profiles and the ability to follow other users.[75] Ping was discontinued in September 2012.[76]

Criticism

Security

The Telegraph reported in November 2011 that Apple had been aware of a security vulnerability since 2008 that would let unauthorized third parties install "updates" to users' iTunes software. Apple fixed the issue before the *Telegraph*'s report and told the media that "The security and privacy of our users is extremely important", though this was questioned by security researcher Brian Krebs, who told the publication that "A prominent security researcher warned Apple about this dangerous vulnerability in mid-2008, yet the company waited more than 1,200 days to fix the flaw."[77]

Software bloat

iTunes has been repeatedly accused of being bloated as part of Apple's efforts to turn it from a music player to an all-encompassing multimedia platform.[65][78][79][80][81] Former *PC World* editor Ed Bott accused the company of hypocrisy in its advertising attacks on Windows for similar practices.[82]

See also

- Apple Music
- Apple Music Festival
- AirPlay
- Digital distribution
- List of audio conversion software
- Comparison of audio player software
- Music visualization

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External links

- Official website (https://www.apple.com/itunes)

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